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(71) Applicant(s)

Matsushita Electric Industrial Co Ltd

(Incorporated in Japan)

1006 Oaza-Kadoma, Kadoma-shi, Osaka 571-0050, Japan

(72) Inventor(s)

Philipe R Morin Ted H Applebaum

Jean-Claude Junqua

(74) Agent and/or Address for Service

J. A. Kemp & Co.

14 South Square, Gray's Inn, LONDON, WC1R 5LX,

**United Kingdom** 

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H4K KFH KF42

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(58) Field of Search

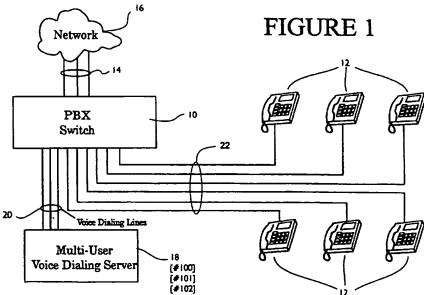
UK CL (Edition O ) H4K KFH KF42

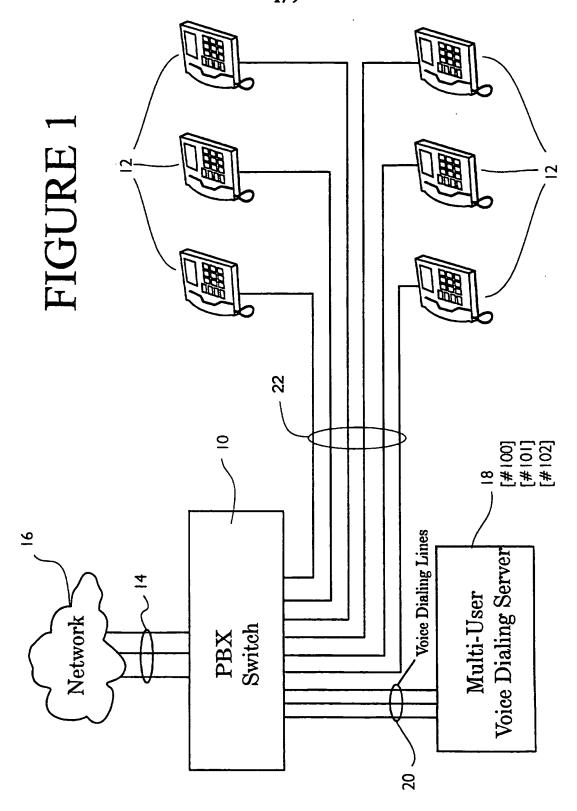
INT CL6 H04M 3/42

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## (54) Voice dialling server for branch exchange telephone systems

(57) The voice dialing server plugs into one or more unused extensions of a branch exchange system to provide each of the users on the system with voice dialing services. To use the system a user simply dials the extension to which the server is attached. The server then prompts the user to supply the name of a party to be called. The name is then looked up in a telephone number dictionary unique to that user. The system then places the telephone call by sending commands to the branch exchange system that simulate the operations a user would perform to connect to an outside line or inside extension and then place the call. The server incorporates a speech processing module having a multistage word recognizer that represents speech in terms of high phoneme similarity values. This representation is highly compact, allowing the word recognizer to perform the recognizer and fine match stages with far less processor overhead than frame-by-frame speech recognizers.





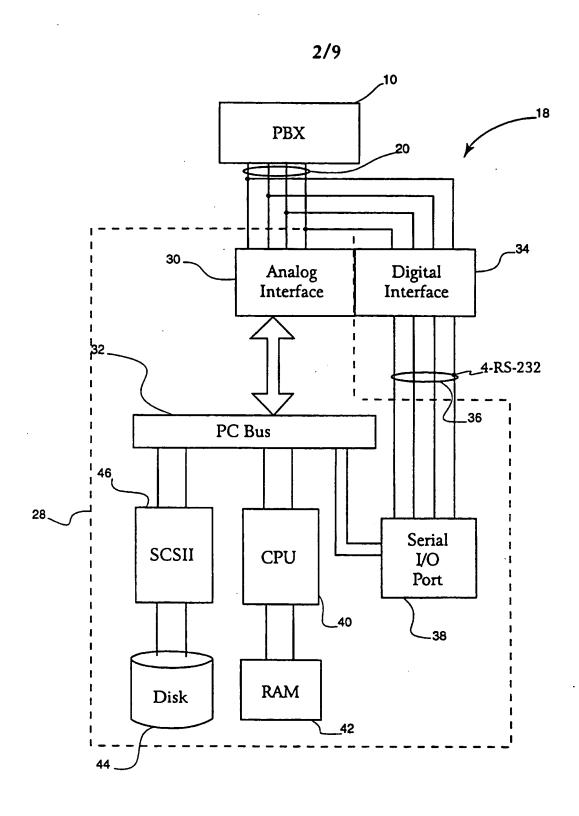


Figure 2

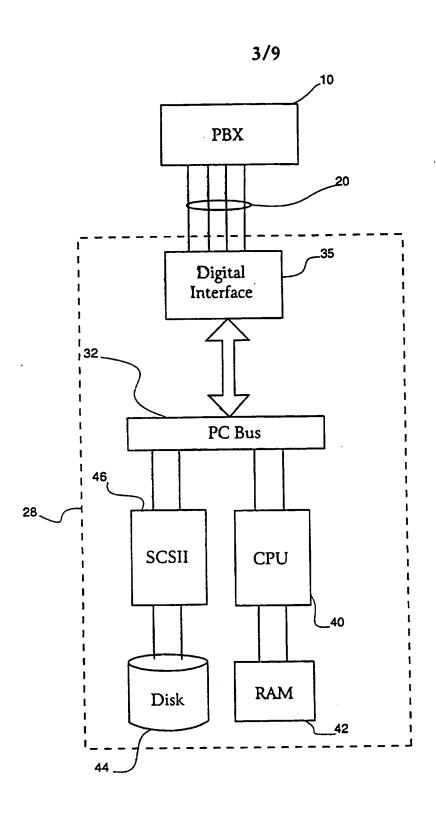


Figure 3

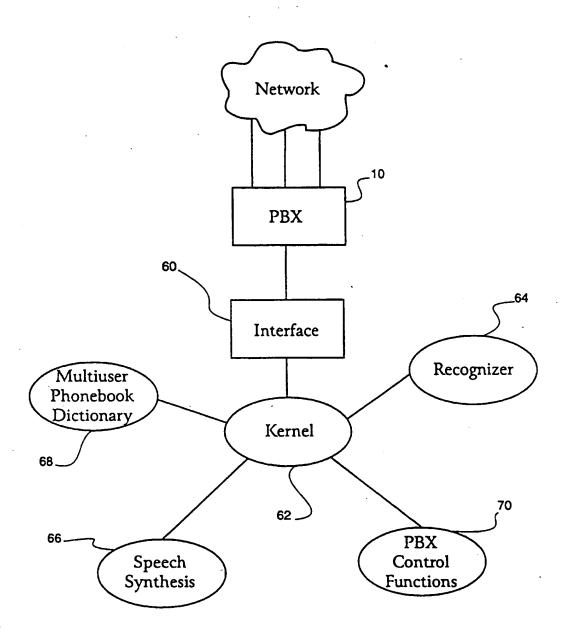


Figure 4

## FIGURE 5 User (Ext. #214) Network Places call to Server (Ext. #100) **PBX** .92 Switch Server Prompts **User for Name** Voice Dialing Lines Server Recognizes Multi-User Voice Dialing Server [#100] Name; Looks Up Phone Number to Dial Network $\mathbf{B}$ Server Temporarily Places User (Ext. #214) **PBX** on Hold or in Switch Conference Call Mode Server Places Call Voice Dialing Lines Through PBX Switch Multi-User to Phone Number Voice Dialing Server #100] Looked Up Network Server Causes PBX PBX Switch to Conference Switch in User (Ext. #214) Voice Dialing Lines -100 Multi-User Voice Dialing Server [#100] Network 102\_ **PBX** Server Drops Out Switch of Communication, Freeing Up Server for Next Use Voice Dialing Lines Multi-User Voice Dialing Server [#100]

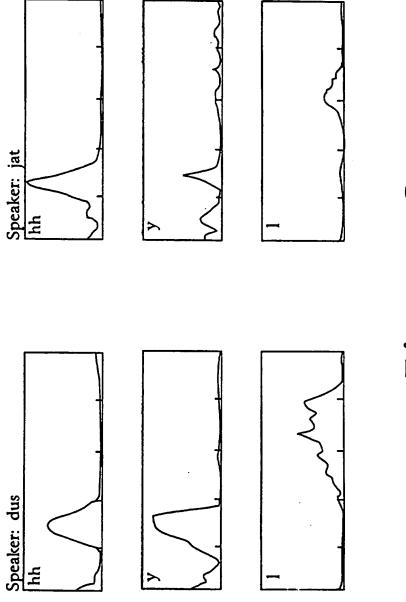


Figure 6

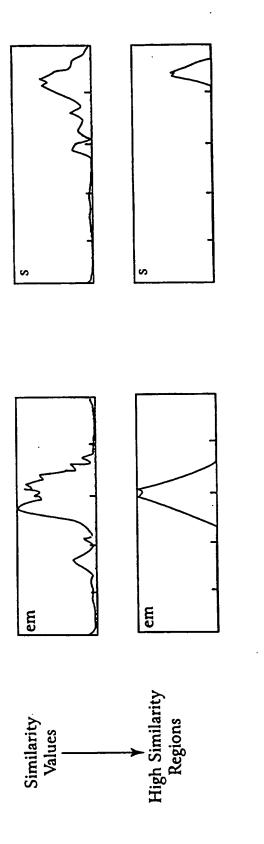


Figure 7

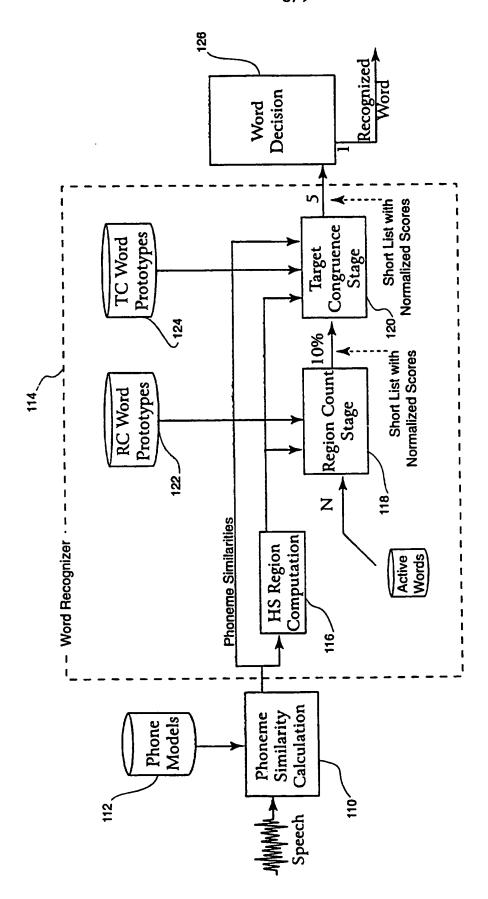


Figure 8

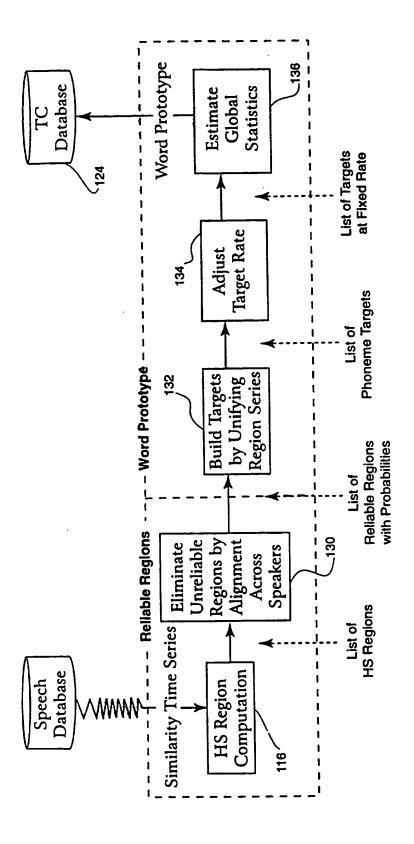


Figure 9